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FACTSHEET

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This Factsheet is one of a set: "Assisting the Ewe at Lambing" and "Care of the Newborn Lamb", concerning lamb survival. They should be read together.

The ewe's gestation period is from 144 to 151 days, with an average of 147 days. The date that the first lambing is to be expected can be calculated from the date of the first exposure of the ewes to a fertile ram. Before lambing starts, a kit of lambing aids should be prepared. The essentials of this kit are:

- soap
- disinfectant
- obstetrical lubricant
- sterile syringes - 10 ml and 1 ml
- hypodermic needles of sizes suitable for the ewe and the lamb
- antibiotics and Vitamin E/selenium injections
- lambing cords and lamb snare
- navel disinfectant - iodine based
- intra-uterine oblets
- clean towels or cloths
- clean pail for warm water.

Colostrum and milk replacer should also be available. The colostrum can be from ewe or cow, frozen in 500 ml units. If lambing is to be inside a building, sufficient individual pens are needed to allow each ewe in the group 2 - 3 days individual housing with her lamb(s).

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Signs of Impending Lambing

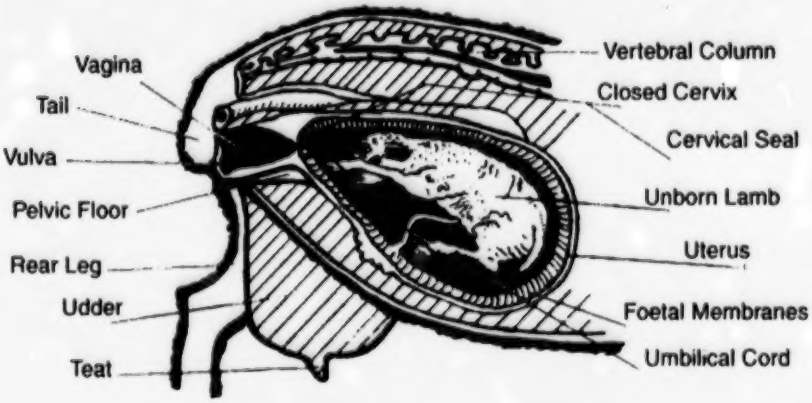
Approximately 10 days before the ewe will lamb, the teats begin to feel firm and full of colostrum. Between then and lambing the lips of the vulva slacken and become slightly swollen. In the last hours before lambing, many ewes will separate from the flock. At this point they should be moved into a lambing pen.

At birth, the normal presentation of a lamb is spine upwards, forefeet with the head between them pointing toward the cervix. The cervix, itself, is still sealed by a mucous plug.

The lamb is surrounded by two fluid-filled sacs, the allantois and the chorion. These first and second waterbags acted as a cushion to prevent injury to the developing foetus. They form part of the placenta. The placenta is attached to the wall of the ewe's uterus by about 80 small buttons, the cotyledons. It is through these and the placenta that the developing lamb has received nutrients from the ewe's blood supply. The placenta with the cotyledons will be expelled as the afterbirth.

Anatomy of the Pregnant Ewe

Full Term Ewe with Lamb in Normal Presentation



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Physiology of Parturition (Lambing)

The mechanism by which any mammal gives birth is stimulated by changes to the dams hormone balance and the bulk of the uterine contents (the fetus and the placental fluids). These stimuli cause the uterus to contract, pushing the fetus into the dilating cervix and expel it.

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Lambing

In a normal lambing, there are three distinct stages:

1. Dilation of the cervix

As the uterine contractions start, a thick creamy white mucous, the remains of the cervical seal, is passed from the vulva. This is often missed. Continued contractions of the uterus push the first waterbag into the cervix, stimulating its dilation. Eventually the cervix will be about the same diameter as the neck of the uterus.

At this time the ewe is uneasy, getting up and down, switching her tail and bleating frequently. There may be some straining. This stage can take 3 - 4 hours.

2. Expulsion of the lamb

As the uterine contractions become stronger and more frequent, the lamb and waterbags are pushed into the dilated cervix. The first waterbag bursts, releasing a watery fluid through the vulva. As the ewe continues to strain, the second waterbag is pushed through the vulva and ruptures, to release a thicker fluid.

The rupturing of these bags has established a smooth, well-lubricated passage through

the vagina. The hooves and nose of the lamb can often be seen in the second waterbag before it bursts.

The ewe continues to strain, gradually expelling the lamb, forefeet first, followed by the head. There may be considerable effort to pass the head and shoulders of the lamb through her pelvis. Once this happened, final delivery is rapid.

The birth of a single lamb should take an hour or less from the rupture of the first waterbag. A ewe, lambing for the first time, or with a multiple birth could take longer.

3. Expulsion of the afterbirth

The placenta serves no further function once the lamb has been born, and is passed 2 to 3 hours after delivery has finished. Nothing will be passed until after the first lamb has been born. In multiple births, there will be separate afterbirths for each lamb.

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Signs of Abnormal Deliveries

Most ewes will lamb unaided and about 95% of lambs are born in the normal presentation, forefeet first. A normal delivery usually takes 5 hours from the start of cervical dilation to the delivery of the lamb, 4 hours for the dilation of the cervix and 1 hour for the actual delivery. The first 4 hours often go unnoticed.

If the ewe:

- continues to strain, but there is no sign of the waterbags, or
- continues to strain an hour after the rupture of the waterbags but there is no sign of a lamb, or
- if the lamb appears to be wedged in the birth canal, or
- if there is an abnormal presentation, a leg back, head back etc.,

assistance may be needed. Any delay in assistance could mean the difference between a live and dead lamb.

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Making the Internal Examination

Cleanliness is important to prevent infection of the uterus. Wash the area round the ewe's vulva with soap and a mild disinfectant to remove any manure and other debris. Scrub hands and arms with soap and a mild disinfectant, and lubricate with soap or an obstetrical cream. The hand is carefully slid into the vagina to feel the lamb and assess the situation. Obviously a person with a small hand is best suited for this task.

In many cases the lamb will be presented normally, you will feel two forelegs with the head between them.

In others there will be a malpresentation:

- one or both forelegs back, or
- head back, or
- hindlegs instead of fore legs, or
- one or both hindlegs back, or
- a breach presentation, only the tail and rump felt.

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Resolutions

Normal Presentation
Place the noose of a lambing cord over each leg above the fetlock joint and apply a firm steady pull synchronized with the ewe's straining. Lubricate the vagina around the lamb

with obstetrical jelly to smooth the passage of the lamb. This is especially important if the waterbags have been ruptured for some time and the vagina has lost this natural lubrication.

Abnormal presentations must be corrected before attempting to pull the lamb. Do not attempt to convert a hind leg presentation to the normal delivery. Pull the lamb out hind legs first, straight back until the lamb's hind legs and pelvis are out of the vulva, then change the pull to downwards towards the ground behind the ewe. Pulling down before the lamb's pelvis is out will wedge the lamb in the pelvic canal of the ewe. Other malpresentations are possible.

Remember that multiple births are common. Two lambs may be presented with legs intertwined. Always ensure that the legs and head are part of the same lamb before attempting to pull it.

Occasionally, deformed lambs will be produced with enlarged heads, stiff joints or skeletal deformities. To successfully lamb, a ewe in these situations may require help from an experienced shepherd or veterinarian.

As ewes often have multiple births, the same sequence of the rupture of the waterbag and expulsion of the lamb will be repeated for the delivery of each lamb. After an assisted lambing always check the ewe internally that there is not another lamb to be delivered.

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Aftercare

In all cases, whether the delivery was natural or assisted, check that the lamb is breathing; its nostrils are clear of mucous and are not covered by any uterine membrane. At this time the lamb's navel should be disinfected to prevent infection.

The ewe usually starts to lick the lamb; this is a natural process and should be allowed to continue. Some ewes will eat the afterbirth, but this should be prevented as it can lead to digestive disturbance.
A healthy lamb struggles to its feet soon after birth and starts to nurse its dam. Lambs, weak from a protracted delivery should be helped to nurse, or given up to 250 ml of colostrum by stomach tube. This first nursing is critical as the colostrum contains antibodies to give the lamb immediate protection against infectious agents common to the flock. All lambs should nurse or be tube fed colostrum within 6 - 8 hours of birth. In the first 24 hours of life, each lamb should receive about one litre of colostrum. After 36 hours the lamb is unable to absorb any more antibody from the colostrum.

After any assisted delivery the ewe should be given an antibiotic injection and have an antibiotic oblet put into the uterus.

Normal presentation

Breech presentation

One leg back

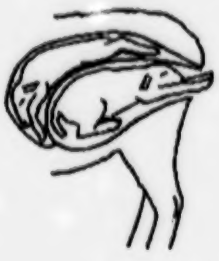
Hind legs only

Head back

Both forelegs back

Elbow lock

Twins - front and back



Four legs - one head

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